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JUN 03 2013

PRO

LAND APPLICATION OF BIOSOLIDS  
HUNTER B. RICHARDSON

KQ38 (FIELDS 1 – 9, 14 – 20)  
KING & QUEEN COUNTY, VIRGINIA  
JUNE 2012



June 29, 2012

Mr. Scott Healey  
Department of Environmental Quality  
Piedmont Regional Office  
4949-A Cox Road  
Glen Allen, VA 23060

Dear Mr. Healey,

Transmitted herein for your consideration is land application site for Hunter Richardson,. (designated as KQ 38, fields 1-9, & 14-20 ), located in King & Queen County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Sylva".

Chris Sylva  
Technical Services Manager



## FIELD SUMMARY SHEET

Hunter Richardson

KQ 38

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
38-01	61.3	60.7	104		Shacklefords	Susan Richardson
38-02	51.0	48.1	104		Shacklefords	Susan Richardson
38-03	57.8	57.4	75		Shacklefords	Susan Richardson
38-04	35.9	35.9	75		Shacklefords	Susan Richardson
38-05	29.6	28.6	75		Shacklefords	Susan Richardson
38-06	65.2	65.0	75		Shacklefords	Susan Richardson
38-07	34.5	34.5	110		Gressitt	Hunter B Richardson
38-07a	85.9	83.0	2158		Gressitt	Hunter B Richardson
38-08	21.8	17.7	147		Gressitt	Hunter B Richardson
38-08a	80.6	71.3	363		Gressitt	Hunter B Richardson
38-09	7.5	7.5	147		Gressitt	Hunter B Richardson
38-14	29.7	29.7			Shacklefords	Hunter B Richardson
38-15	110.0	104.0			Gressitt	S.M. Richardson, Jr
38-16	830.1	793.3			Machodoc	Hunter B Richardson
38-17	20.4	19.0			Shacklefords	James Bristow
38-18	27.4	24.2			Gressitt	Raymond Wyatt Jr.
38-19	111.9	103.1			Shacklefords	William Didlake
38-20	38.2	36.4			Shacklefords	William Didlake
TOTALS:	1698.8	1619.4				

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 6/25/12 between William Didlake referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as William Didlake, located in K&Q, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:



I am the sole owner of the properties identified herein.



I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

Landowner- Printed Name

Signature

Mailing Address

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Chris Silva

Permittee- Authorized Representative  
Printed Name

Signature

10647 Tidewater Trail  
Champlain, VA 22438

Mailing Address



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

  
Landowner's Signature

6-27-12  
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D : MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 4/25/12 between Raymond Wyatt referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as Raymond Wyatt Jr., located in K+Q, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.  
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

Landowner- Printed Name

Signature

Mailing Address

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Chris Silva  
 Permittee- Authorized Representative  
 Printed Name

Chris Silva  
 Signature

10647 Tidewater Trail  
Champlain, VA 22438  
 Mailing Address

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

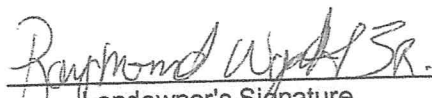
I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

  
Landowner's Signature

Rev 10/03/2011

6-26-12  
Date



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D : MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 6/25/18 between James Bristow referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as James Bristow, located in K+Q, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ I am the sole owner of the properties identified herein.  
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

James A Bristow      James A Bristow      874 BEULAH RD.  
Landowner- Printed Name      Signature      Mailing Address

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Chris Sylva</u>	<u>Chris Sylva</u>	<u>10647 Tidewater Trail</u>
Permittee- Authorized Representative	Signature	Mailing Address
Printed Name		



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VILAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

  
Landowner's Signature

JUNE 20 2012  
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D : MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 6/25/12 between S.M. Richardson referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as S.M. Richardson Jr, located in K+Q, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ I am the sole owner of the properties identified herein.  
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

S.M. Richardson Jr      S.M. Richardson Jr      182 Island Ln  
Landowner- Printed Name      Signature      Mailing Address  
Shackelford VA 23136

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Chris Silva</u>	<u>Chris Silva</u>	<u>10647 Tidewater Trail</u>
Permittee- Authorized Representative	Signature	Mailing Address
Printed Name		Champlain, VA 22438



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

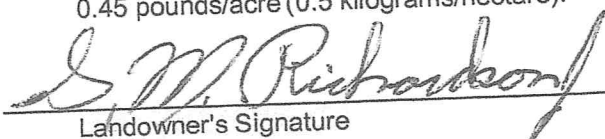
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  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

  
Landowner's Signature

6/27/12  
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 6/25/12 between Hunter Richardson referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as Hunter B. Richardson, located in Roanoke, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ I am the sole owner of the properties identified herein.  
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

Hunter B. Richardson      Hunter B. Richardson      3997 Buena Vista  
Landowner- Printed Name      Signature      Mailing Address      Roanoke

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Chris Silva      Chris Silva      10647 Tidewater Trail  
Permittee- Authorized Representative      Signature      Mailing Address  
Printed Name      Champlain, VA 22438



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
  - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
  - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
  - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
  - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
  - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
  - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
  - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

  - a. Meat producing livestock shall not be grazed for 30 days,
  - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
  - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Hunter B. Richardson  
Landowner's Signature

6/25/12  
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION  
FORM D : MUNICIPAL EFFLUENT AND BIOSOLIDS**

**PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS**

A. This biosolids/industrial residuals land application agreement is made on 6/25/12 between Susan Richardson referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

**Landowner:**

I am the registered owner of real property known as Susan Richardson, located in CTA, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ I am the sole owner of the properties identified herein.  
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

Susan T. Richardson    S. Richardson    2668 Buena Vista Rd.  
 Landowner- Printed Name                      Signature                      Mailing Address  
Shackelfords, VA 23156

**Permittee:**

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Chris Sylva</u>	<u>Chris Sylva</u>	10647 Tidewater Trail
Permittee- Authorized Representative	Signature	Champlain, VA 22438
Printed Name		Mailing Address



**VIRGINIA POLLUTION ABATEMENT APPLICATION  
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC  
Landowner: \_\_\_\_\_

Permit # or County: \_\_\_\_\_  
Farm Name or Address: \_\_\_\_\_

**Landowner Site Management Requirements:**

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  - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
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  - a. Meat producing livestock shall not be grazed for 30 days,
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  - c. Other animals shall be restricted from grazing for 30 days;
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6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Susan J. Richardson  
Landowner's Signature

6/26/12  
Date

## Tax ID Landowner Identification Sheet

<b>Landowner</b>	<b>Field #</b>	<b>Tax ID</b>
Susan Richardson	38-1	
Susan Richardson	38-02	
Susan Richardson	38-03	
Susan Richardson	38-04	
Susan Richardson	38-05	
Hunter B Richardson	38-06	
Hunter B Richardson	38-07	
Hunter B Richardson	38-07a	
Hunter B Richardson	38-08	
Hunter B Richardson	38-08a	
Hunter B Richardson	38-09	
Hunter B Richardson	38-14	
Susan Richardson	38-15	
Hunter B Richardson	38-16	
James Bristow	38-17	
Raymond Wyatt Jr.	38-18	
William Didlake	38-19	
William Didlake	38-20	



Field #	Latitude (north)	Longitude (west)
38-01	37° 31' 20.26"	76° 40' 50.49"
38-02	37° 31' 07.79"	76° 40' 42.44"
38-03	37° 30' 32.90"	76° 40' 30.22"
38-04	37° 30' 35.18"	76° 40' 52.22"
38-05	37° 30' 43.54"	76° 41' 00.22"
38-06	37° 30' 31.81"	76° 41' 11.51"
38-07	37° 28' 37.51"	76° 42' 10.75"
38-07a	37° 28' 33.77"	76° 42' 04.68"
38-08	37° 29' 52.30"	76° 40' 14.16"
38-08a	37° 30' 03.68"	76° 40' 01.12"
38-09	37° 28' 57.12"	76° 40' 19.15"
38-14	37° 33' 27.49"	76° 40' 36.51"
38-15	37° 28' 46.10"	76° 40' 38.12"
38-16	37° 33' 52.59"	76° 40' 43.25"
38-17	37° 33' 20.98"	76° 40' 54.16"
38-18	37° 29' 38.97"	76° 40' 00.74"
38-19	37° 31' 53.84"	76° 44' 25.44"
38-20	37° 30' 11.88"	76° 44' 45.53"

## FIELD SOILS SUMMARY

Field	Map Unit	Acres	Percentage
38-01	17B	43.8	72
38-01	4B	6.6	11
38-01	15C	3.9	6
38-01	15B	3.4	6
38-01	17A	2.9	5
		60.6	100
38-02	17B	31.7	71
38-02	17A	6.4	15
38-02	15C	6.4	14
		44.5	100
38-03	17B	47.4	86
38-03	17A	7.9	14
		55.2	100
38-04	17B	23.5	66
38-04	17A	10.0	28
38-04	17C	2.2	6
		35.7	100
38-05	17B	13.5	49
38-05	17A	7.1	26
38-05	17C	6.9	25
		27.5	100
38-06	17B	28.5	47
38-06	5D	28.1	46
38-06	17C	4.4	7
		61.0	100
38-07	16B	16.4	48
38-07	17A	9.3	27
38-07	19A	5.2	15
38-07	5D	3.7	10
		34.5	100
38-07a	5D	33.8	42
38-07a	19A	24.3	30
38-07a	17A	16.3	20
38-07a	16B	6.2	8
		80.7	100
38-08	17B	16.6	94
38-08	5E	1.0	6
		17.6	100



Field	Map Unit	Acres	Percentage
38-08a	5E	37.2	54
38-08a	17B	27.3	40
38-08a	17C	4.6	6
		69.1	100
38-09	4B	3.3	45
38-09	15B	2.2	29
38-09	4A	1.9	26
		7.5	100
38-14	4B	26.9	91
38-14	5E	2.6	9
		29.6	100
38-15	15B	34.8	35
38-15	5D	21.0	21
38-15	4B	18.6	18
38-15	15C	18.5	18
38-15	4C	7.5	8
		100.4	100
38-16	5E	316.2	41
38-16	4B	302.0	39
38-16	5D	152.3	20
		770.5	100
38-17	4B	16.9	89
38-17	5E	2.0	11
		18.9	100
38-18	17B	23.4	97
38-18	15B	0.7	3
		24.2	100
38-19	4B	40.8	41
38-19	15B	21.9	22
38-19	15A	16.2	17
38-19	4A	11.0	11
38-19	4C	8.6	9
		98.5	100
38-20	19A	25.0	76
38-20	3B	4.0	12
38-20	3A	4.0	12
		33.0	100

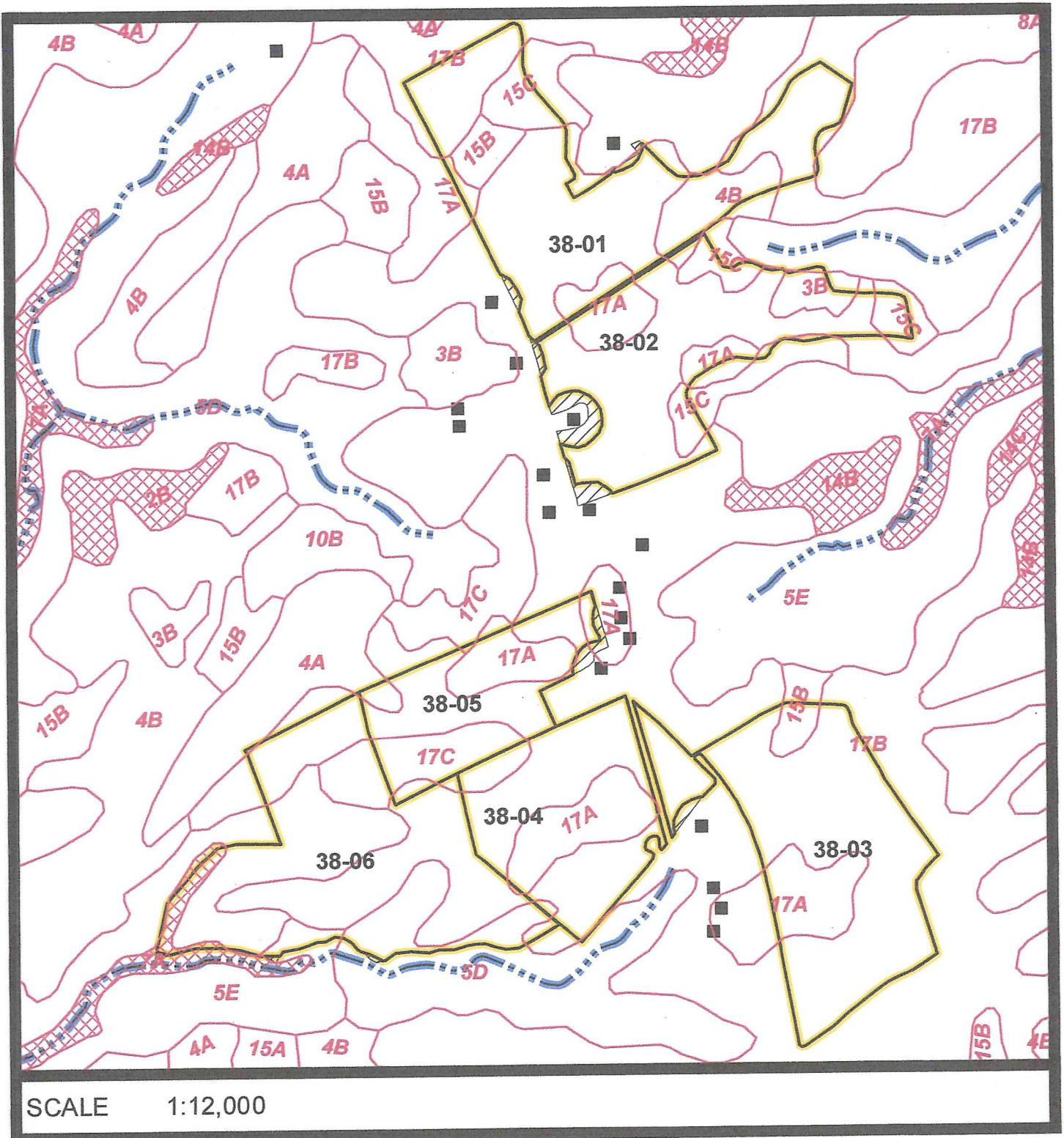
## Environmentally Sensitive Areas

Field	Reason for Sensitive Area
38-01	None
38-02	None
38-03	None
38-04	None
38-05	None
38-06	None
38-07	None
38-07a	None
38-08	None
38-08a	None
38-09	None
38-14	None
38-15	None
38-16	None
38-17	None
38-18	None
38-19	None
38-20	None

## King & Queen County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
1A	Augusta	Dec – May		
2A, 2B	Bojac			Leaching
7A	Kinston	Nov – June	Nov – June	
8A	Levy	Jan – Dec	Jan – Dec	Drainage
12A	Rappahannock	Jan – Dec	Jan – Dec	Drainage
13A	Roanoke	Nov – May		
14B, 14C	Rumford			Leaching
18B	Tarboro			Leaching
20A	Tomotley	Nov – April		
21A	Wahee	Dec – March		





## SOIL MAP

 Environmentally Sensitive Areas

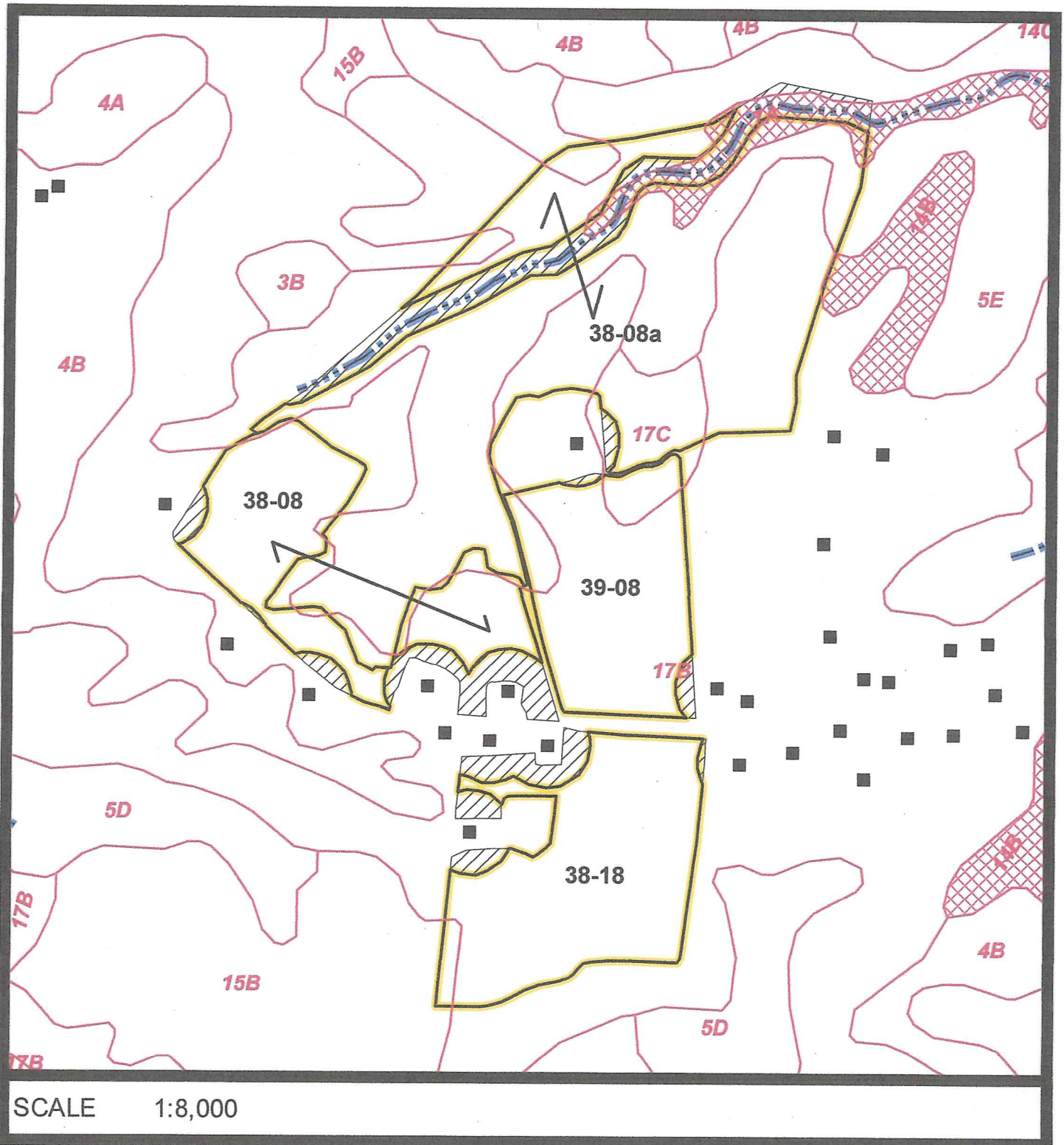





## Environmentally Sensitive Areas





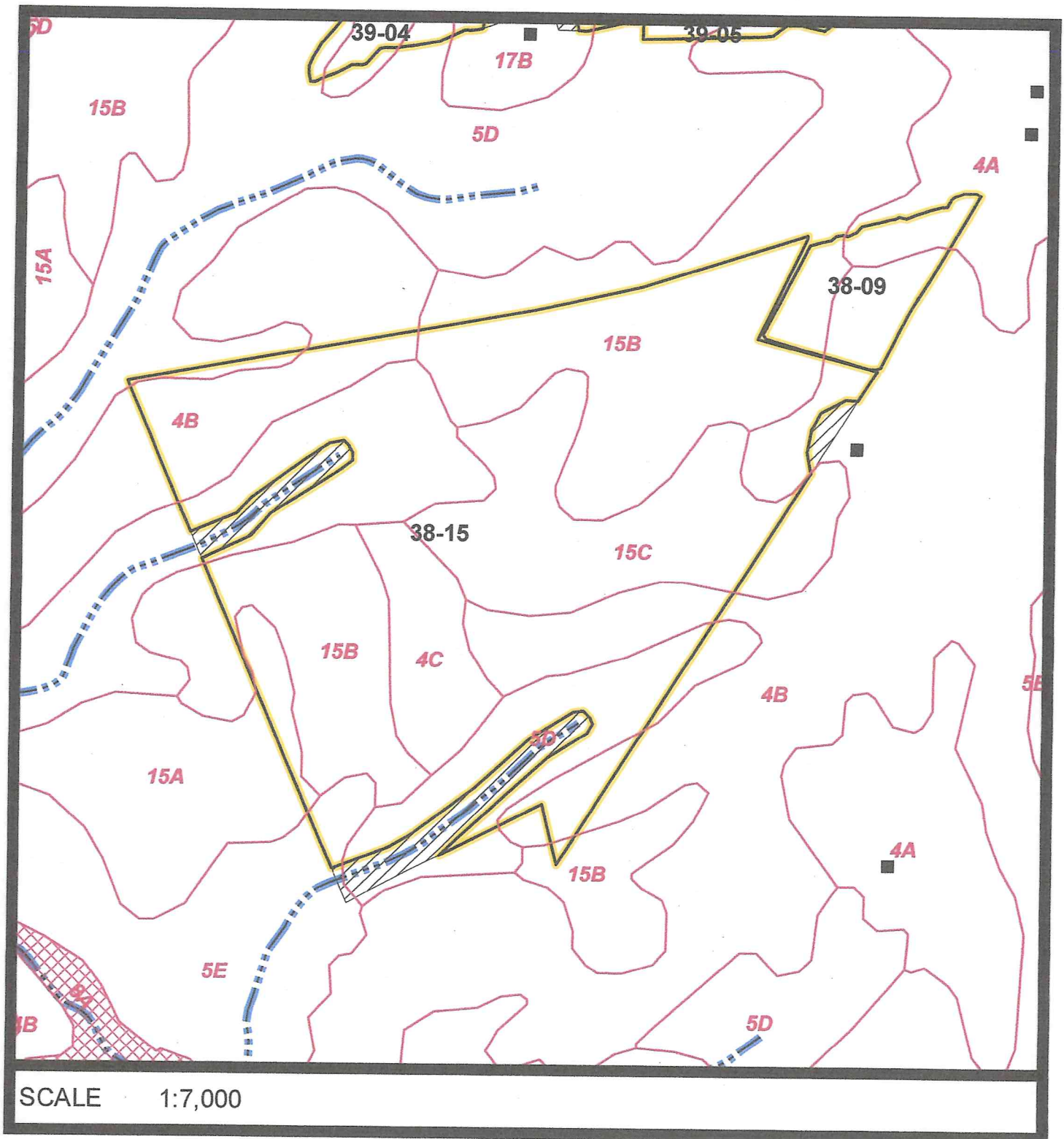


## SOIL MAP

 Environmentally Sensitive Areas





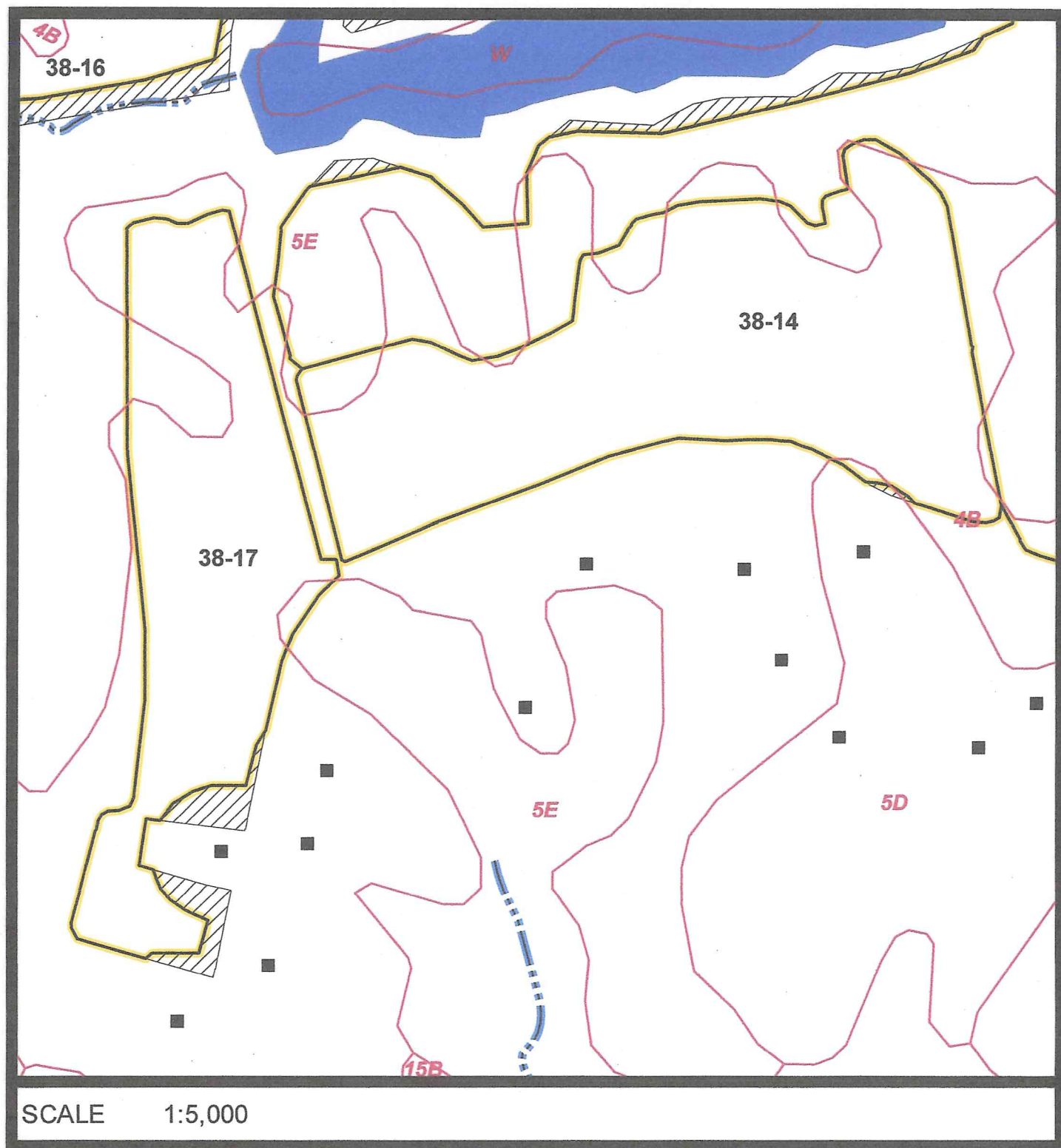


## SOIL MAP



Environmentally Sensitive Areas





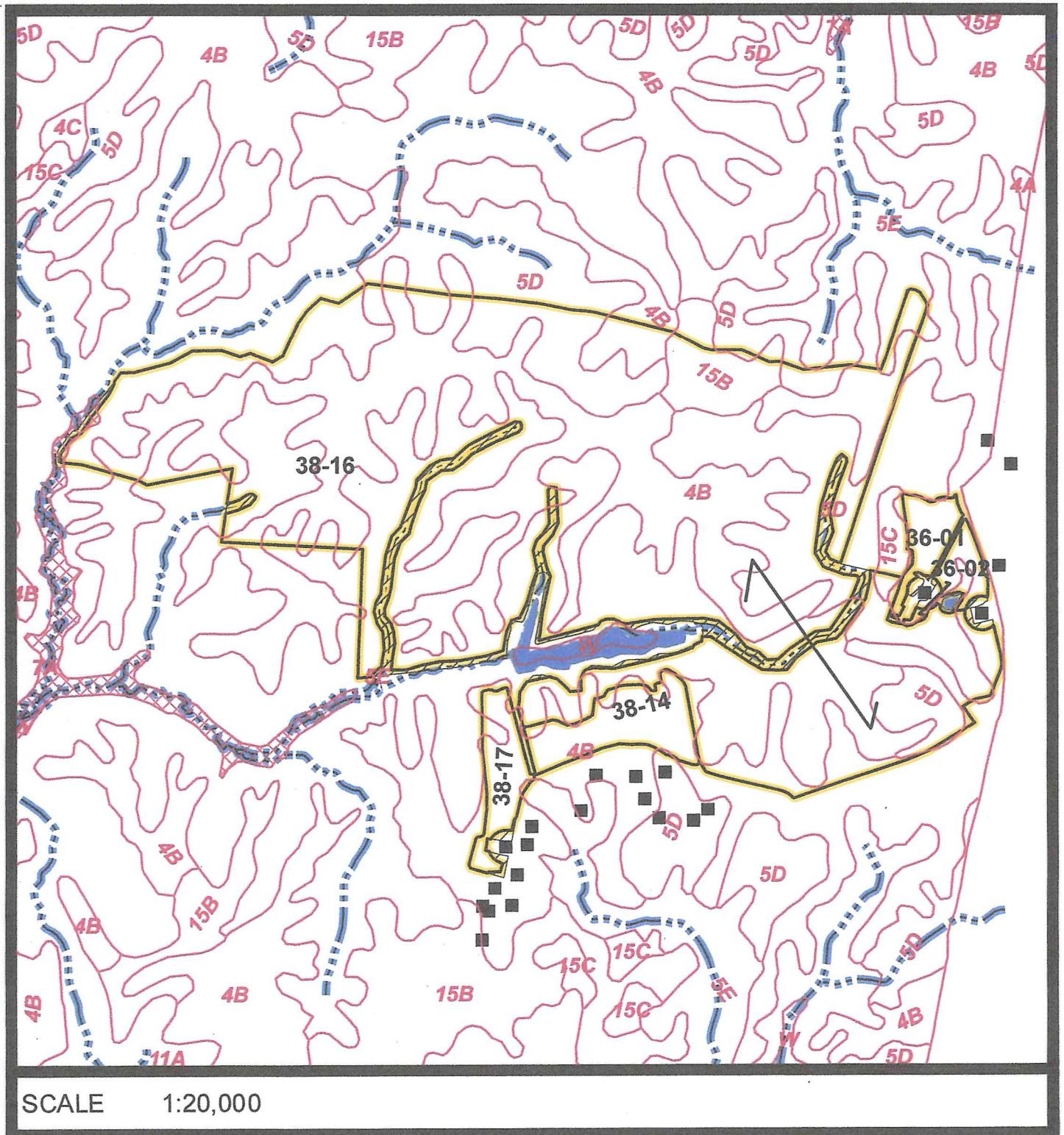
## SOIL MAP



Environmentally Sensitive Areas







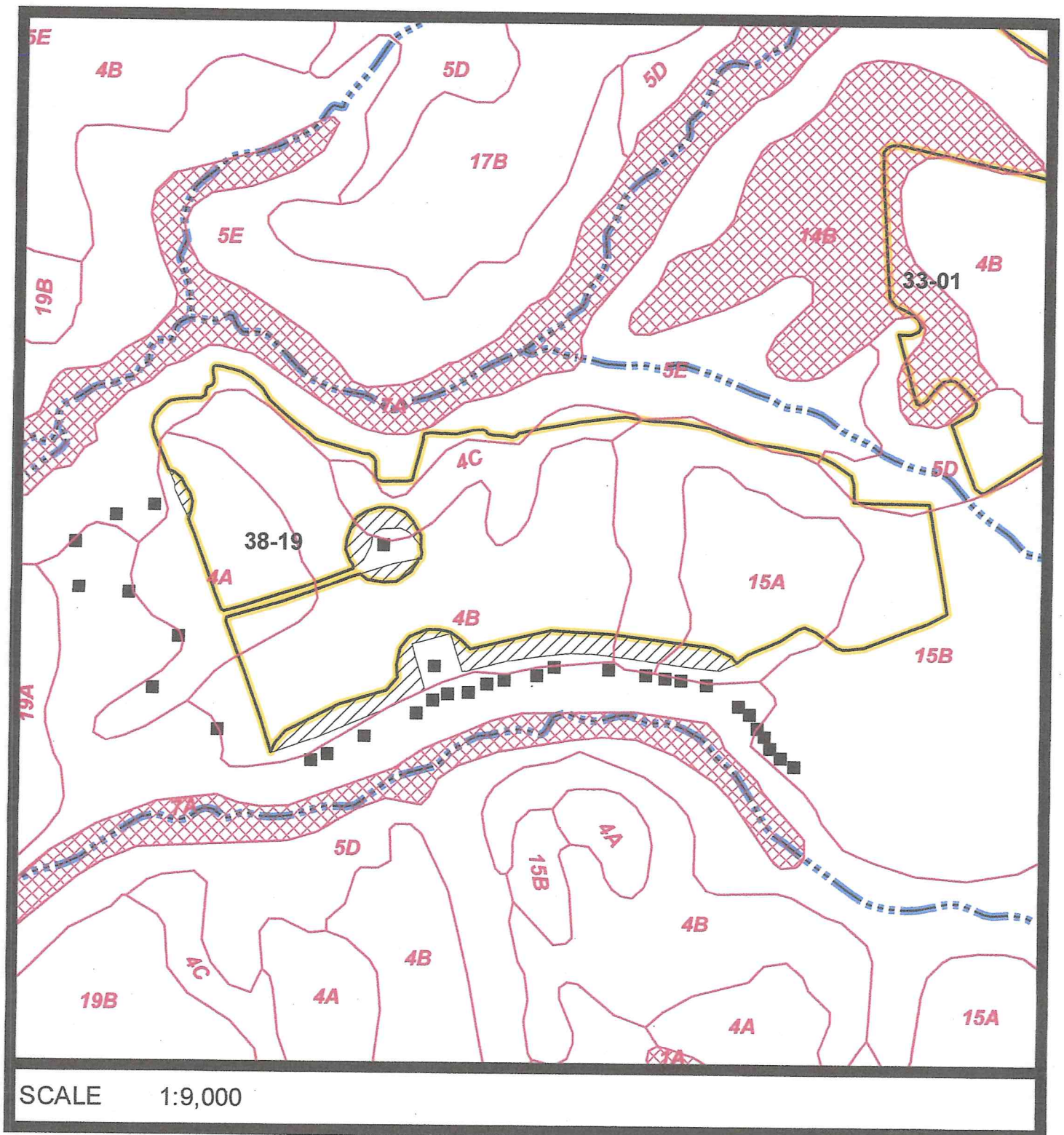
## SOIL MAP



Environmentally Sensitive Areas







## SOIL MAP

 Environmentally Sensitive Areas

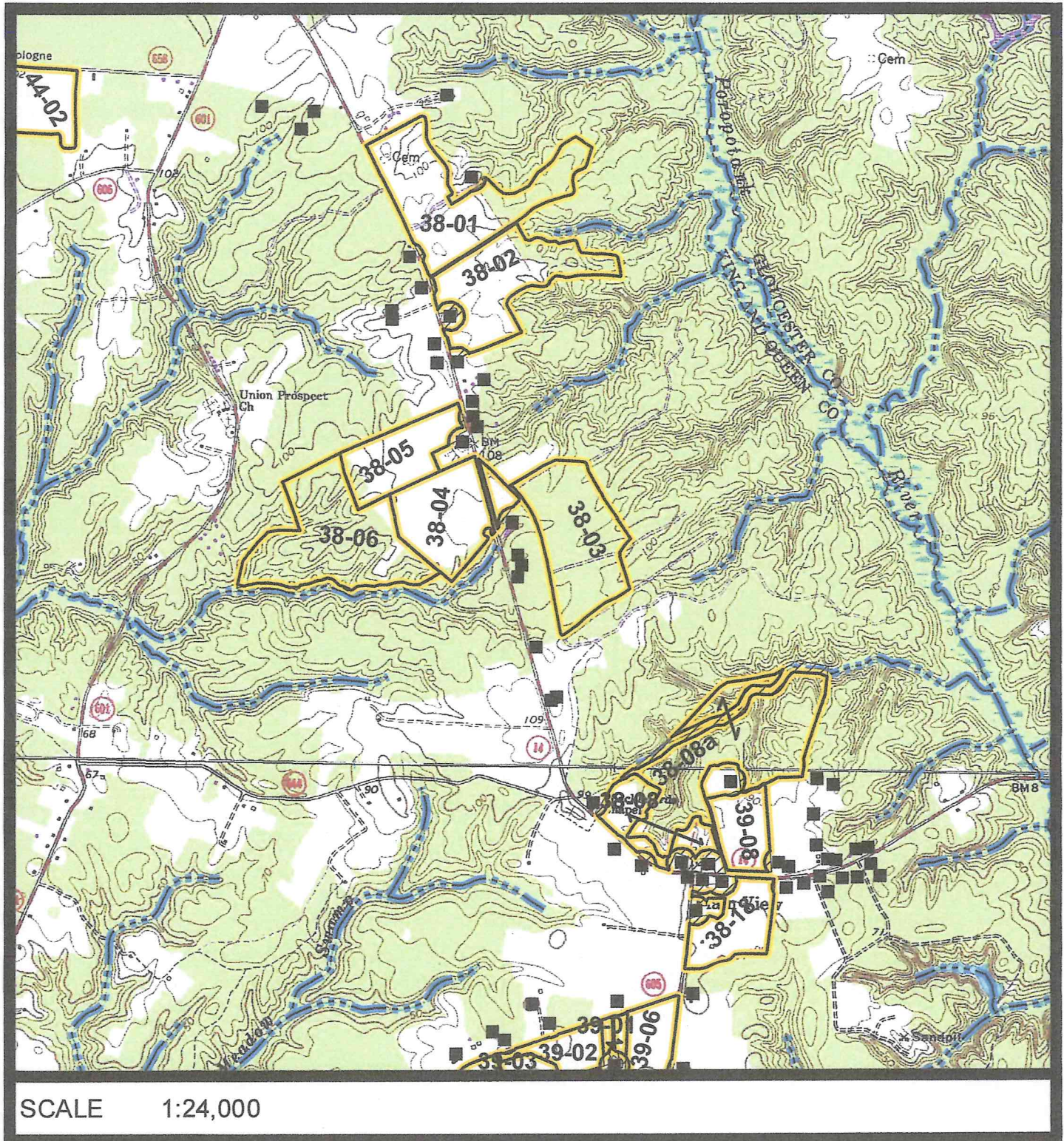






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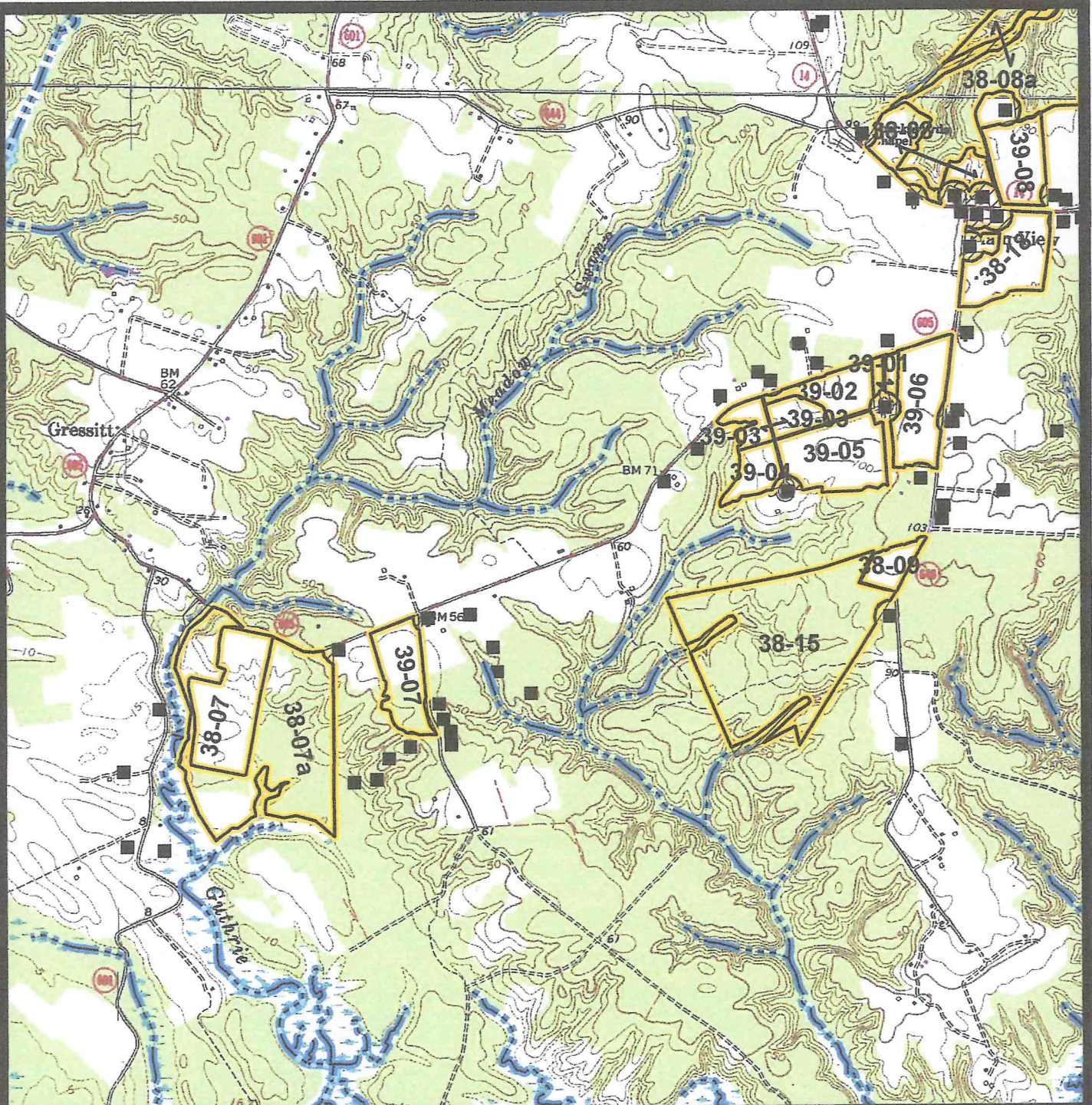




TOPO MAP





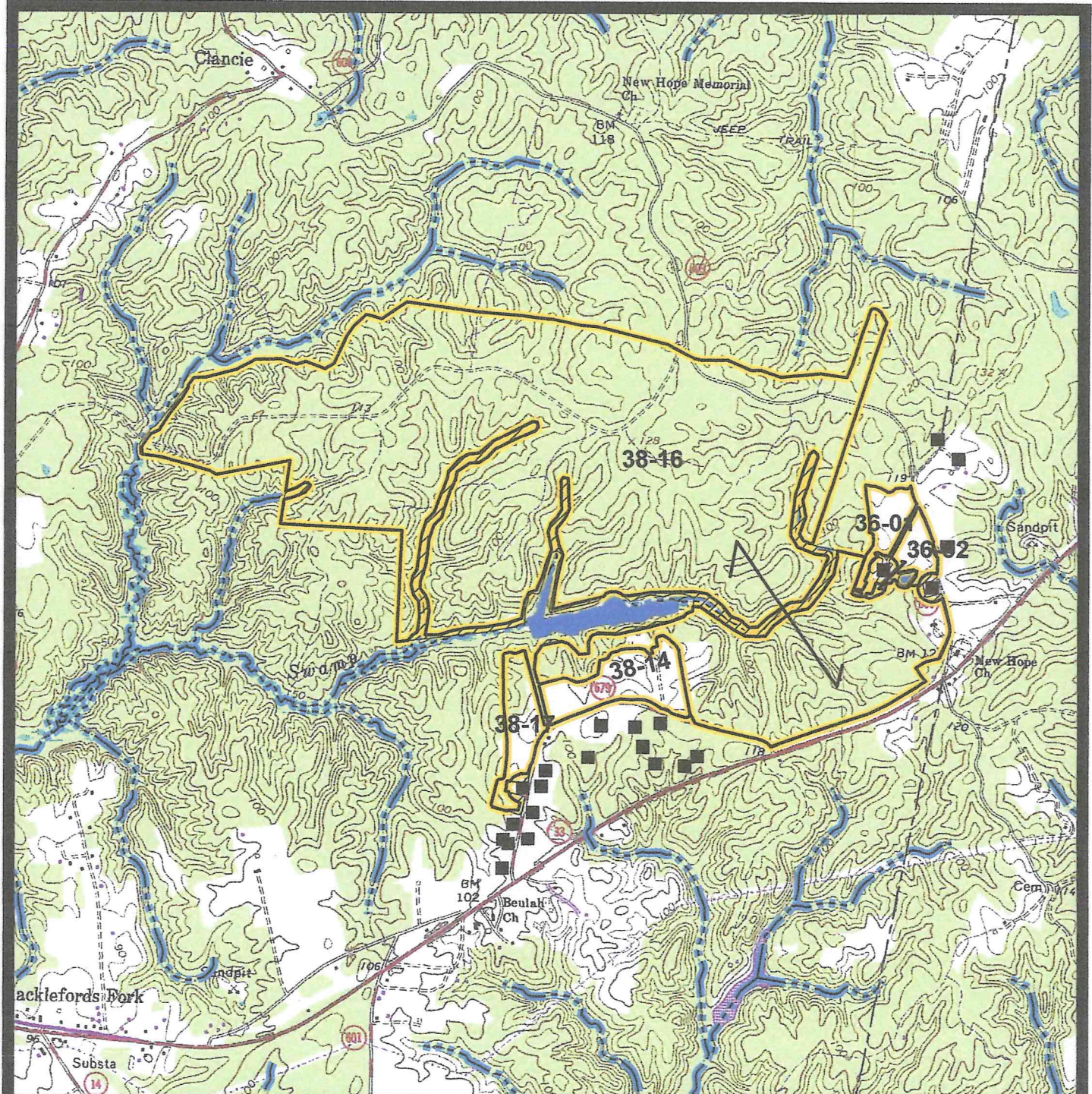


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TOPO MAP





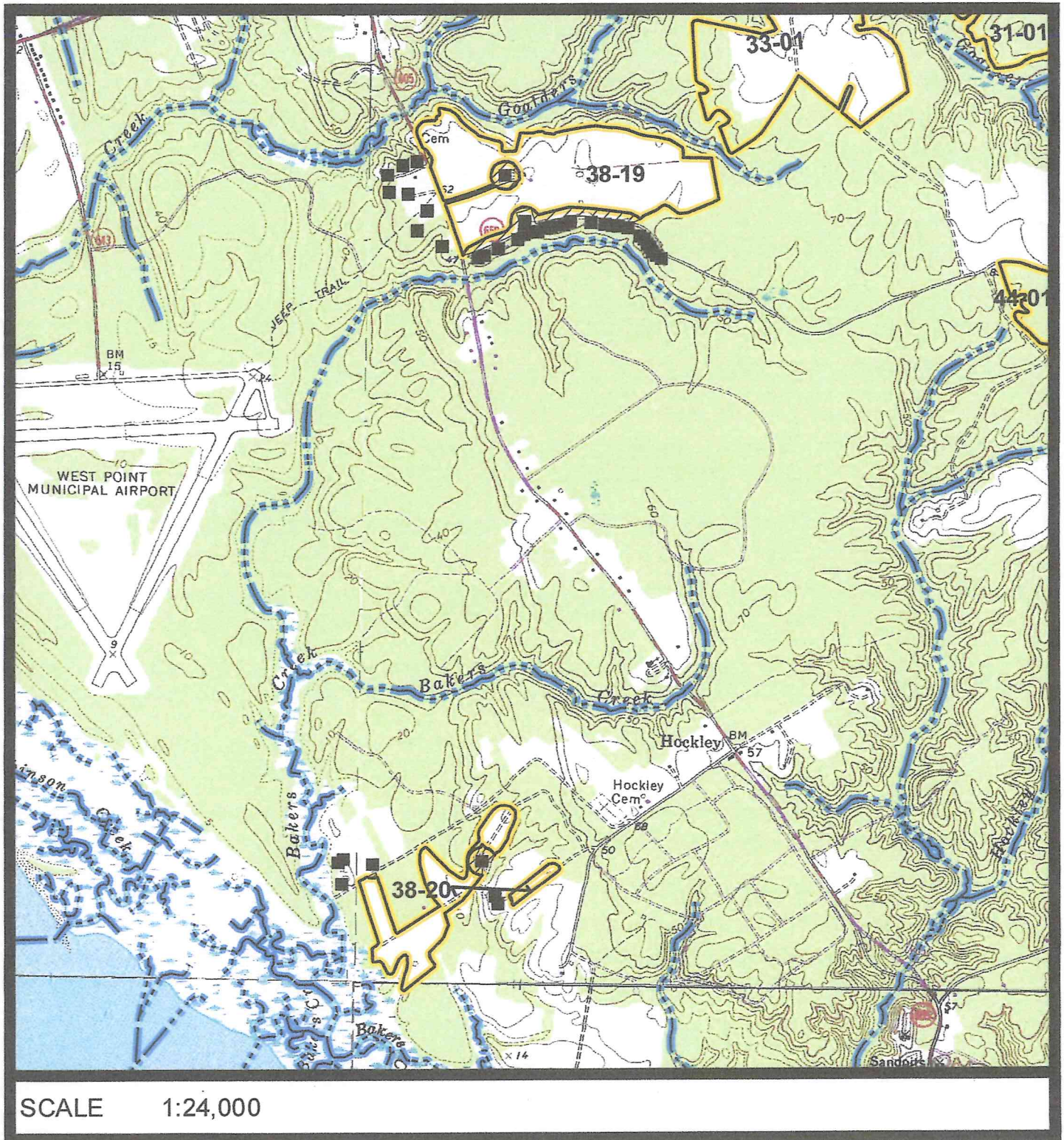


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TOPO MAP



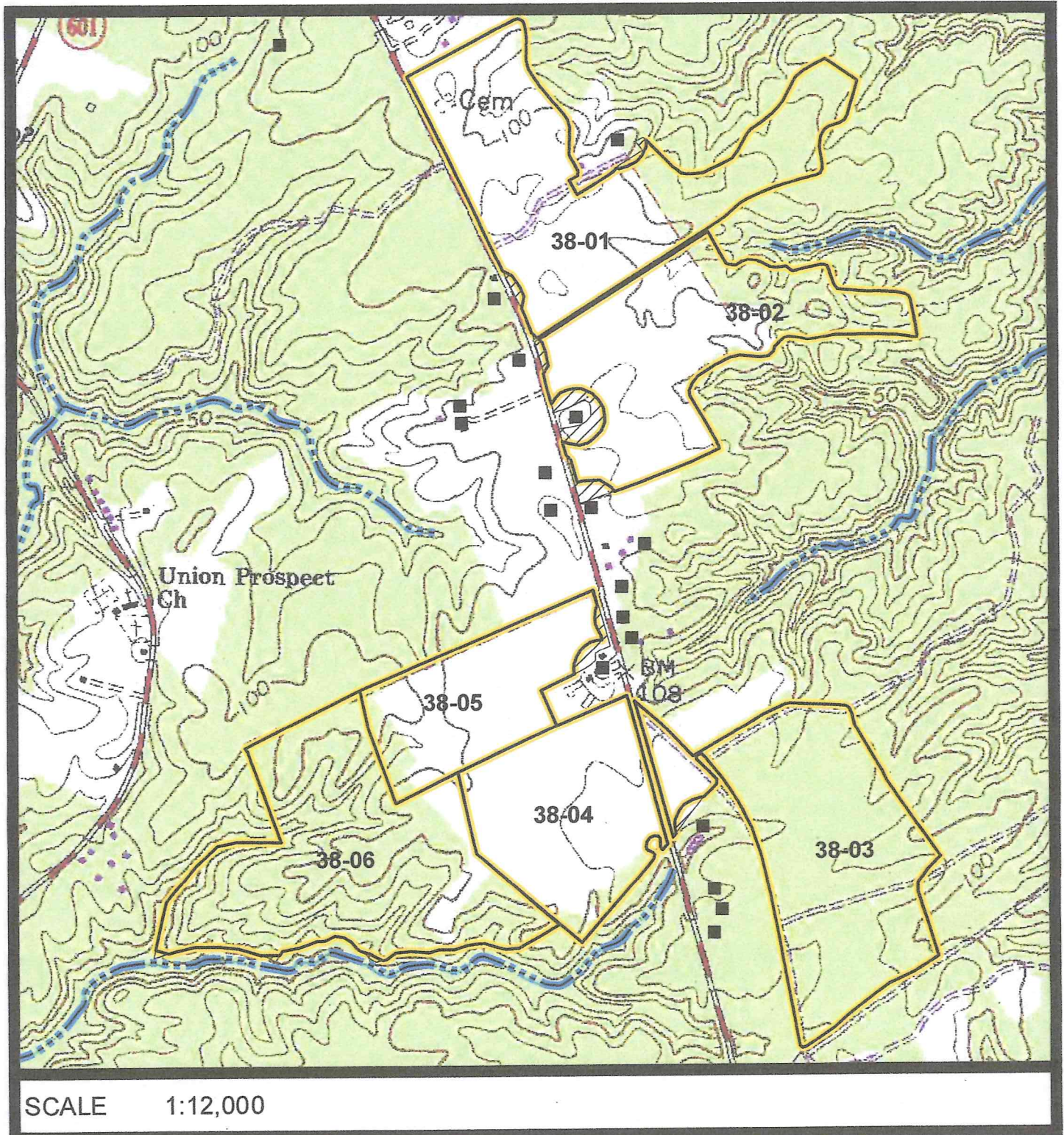




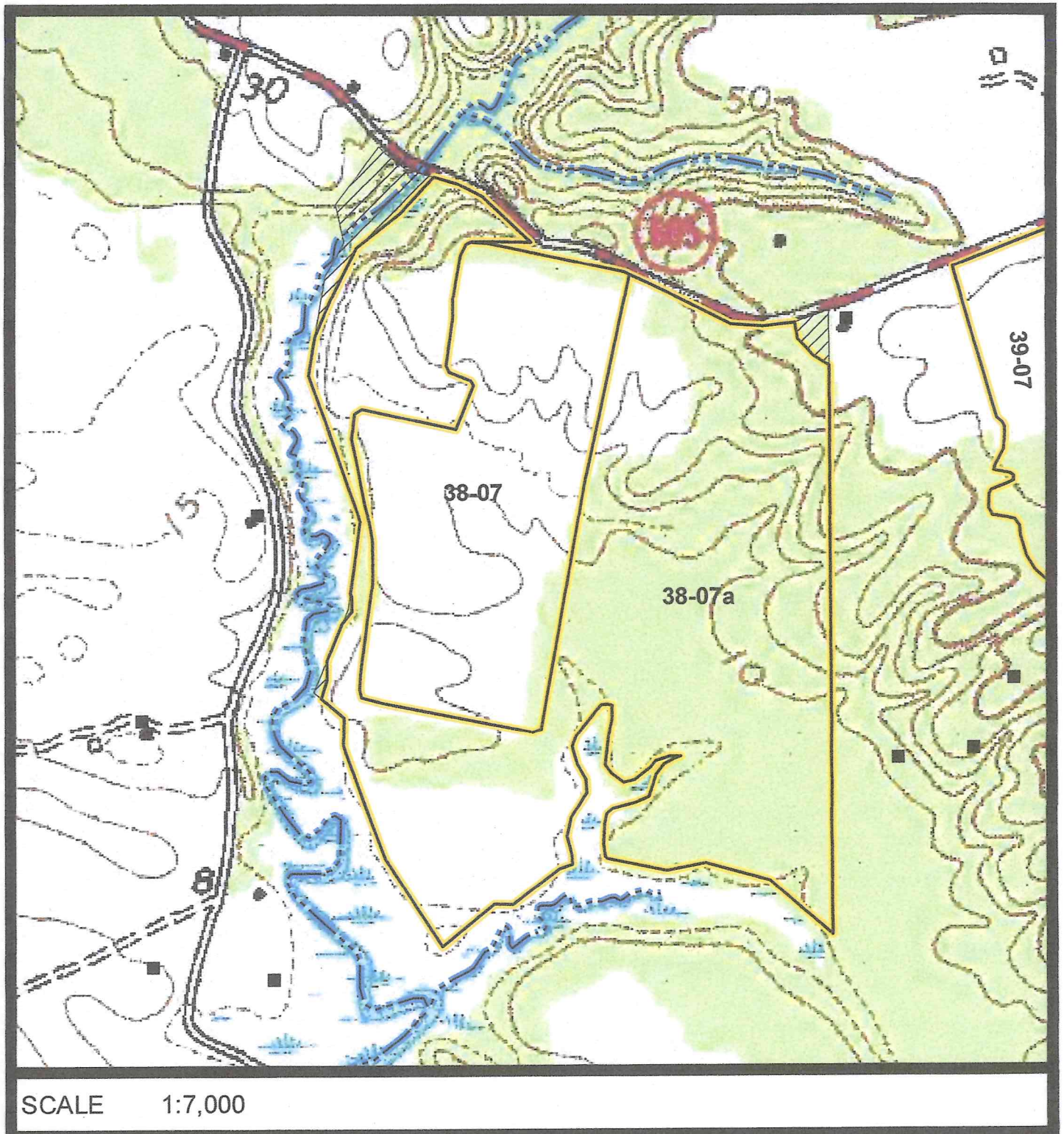
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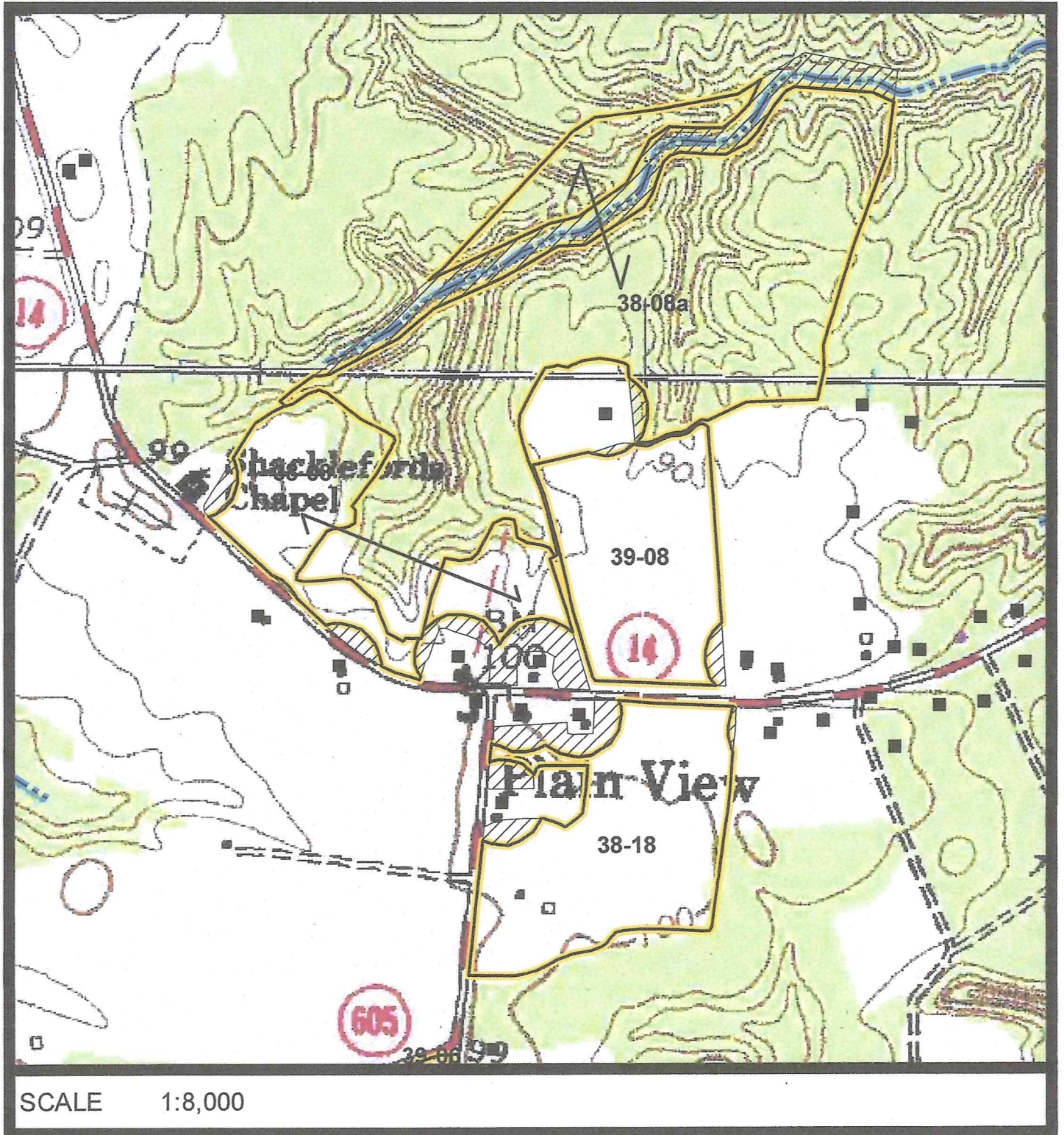




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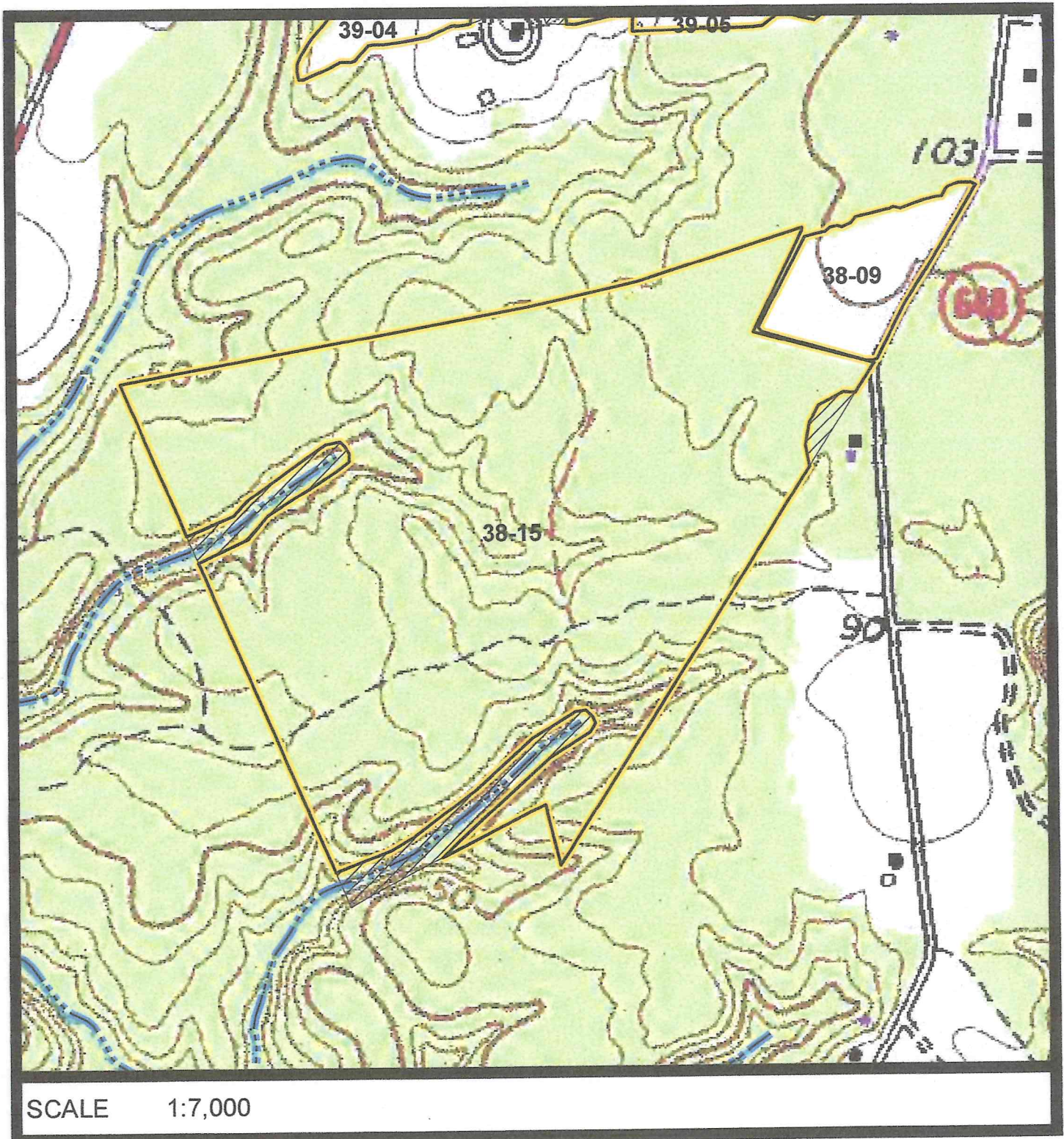




TOPO MAP



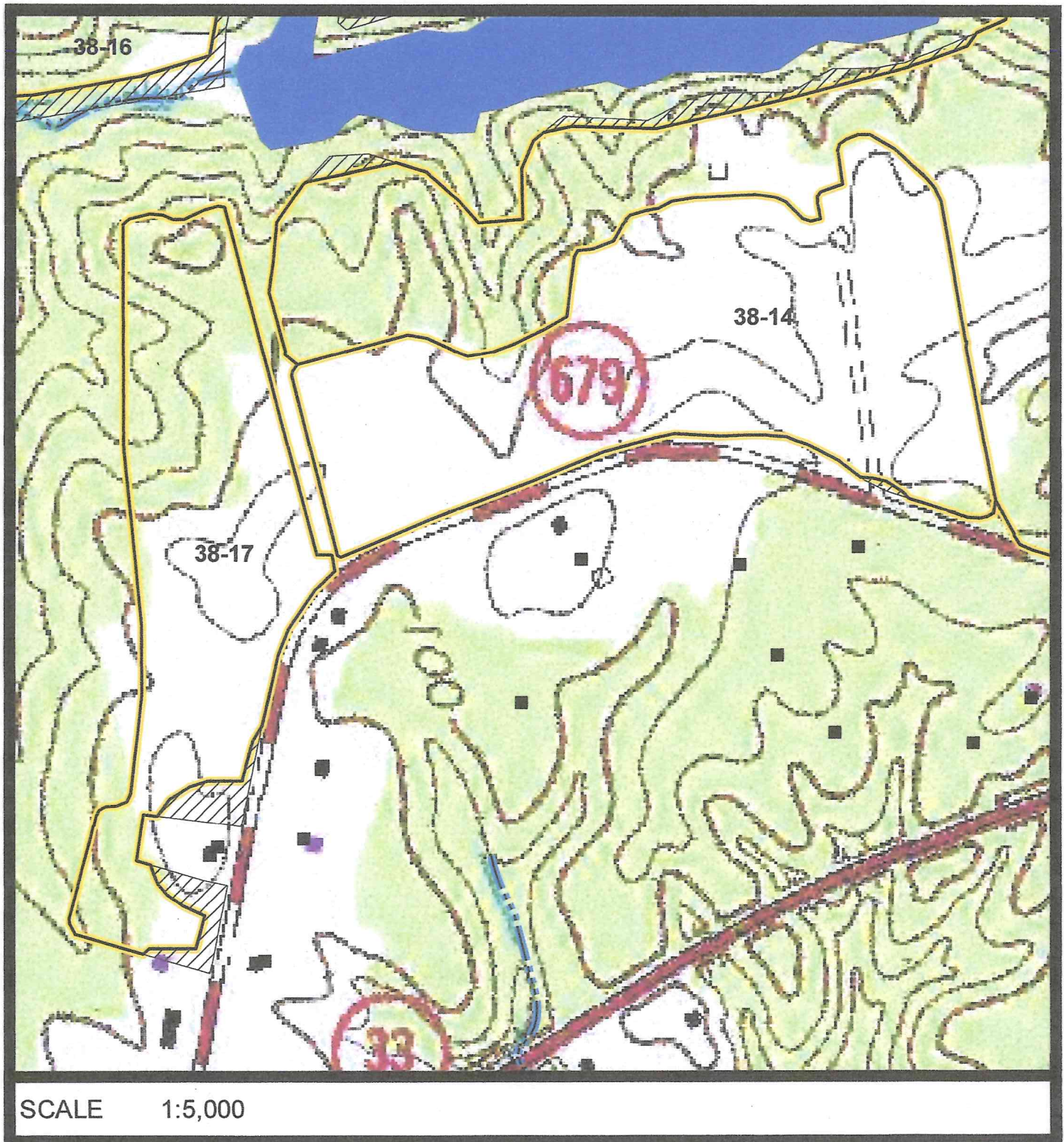




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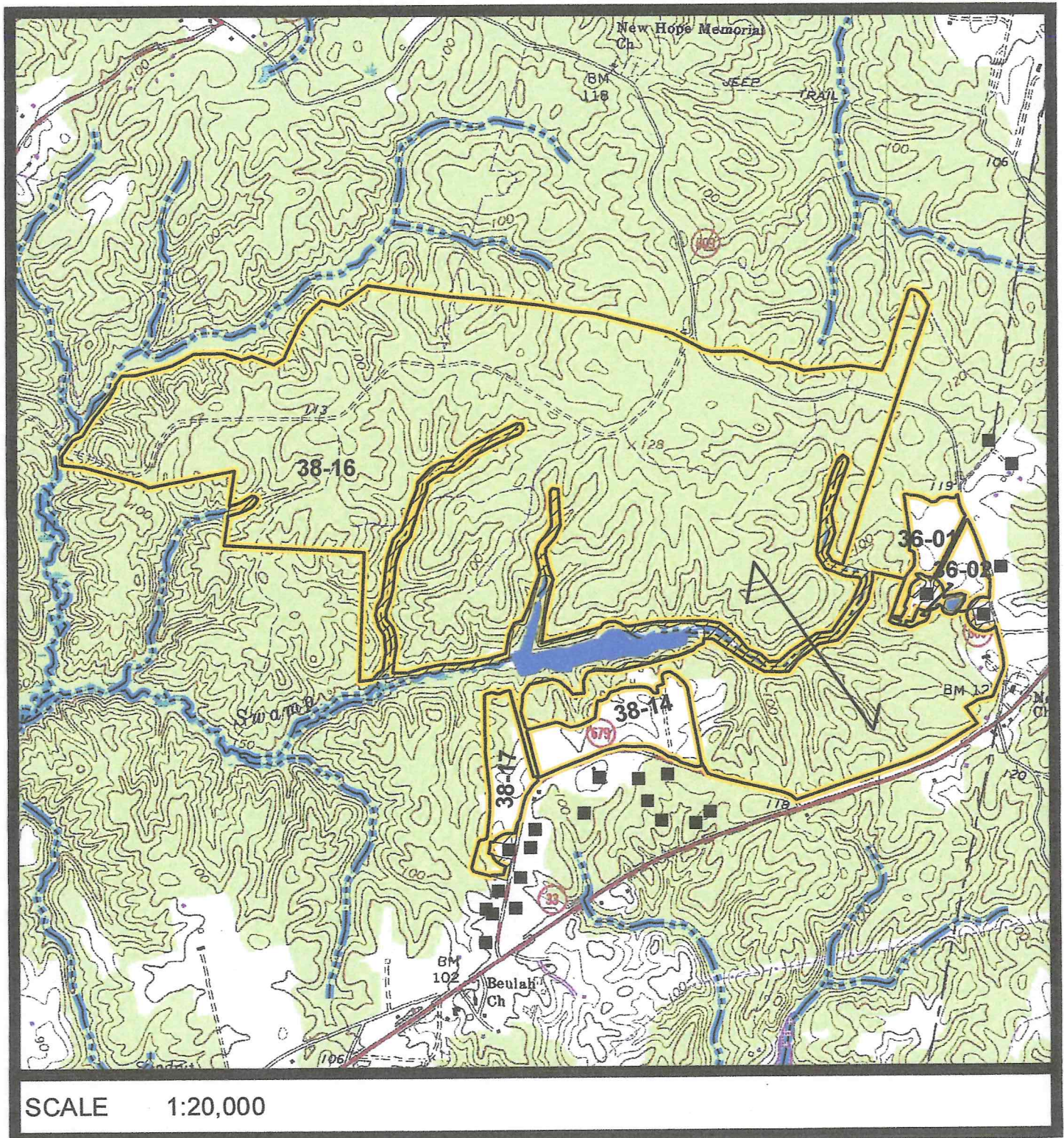




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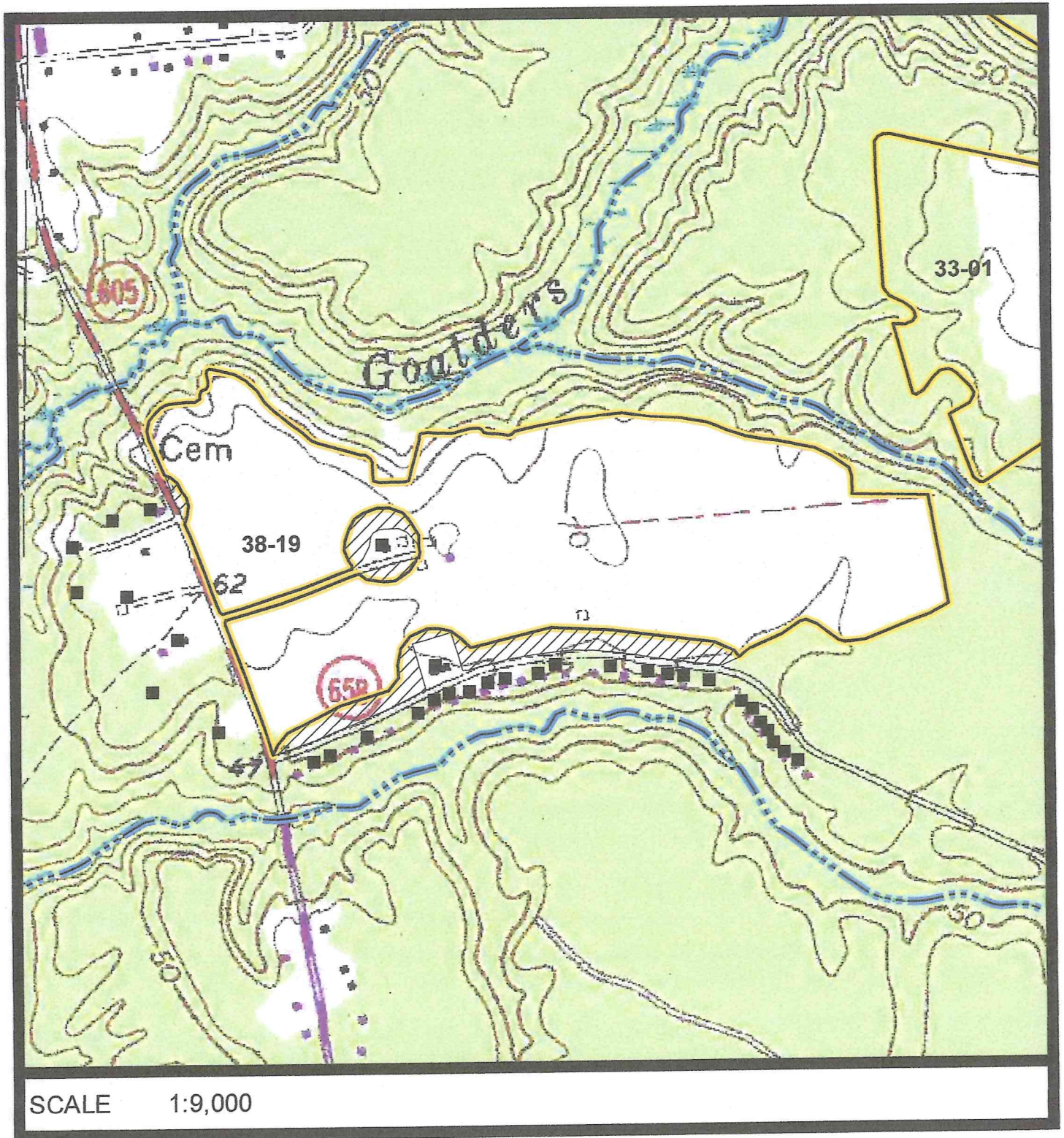




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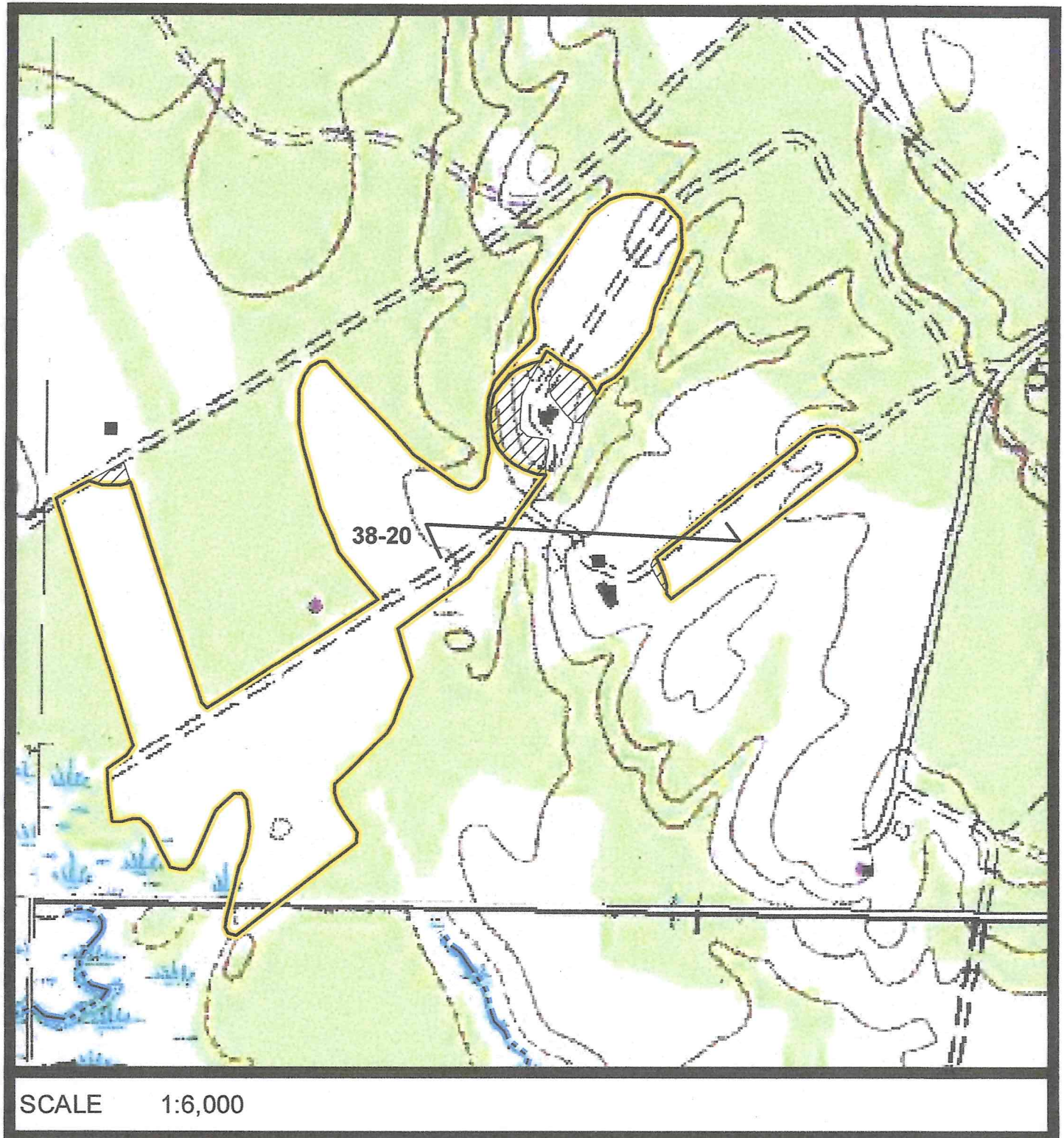




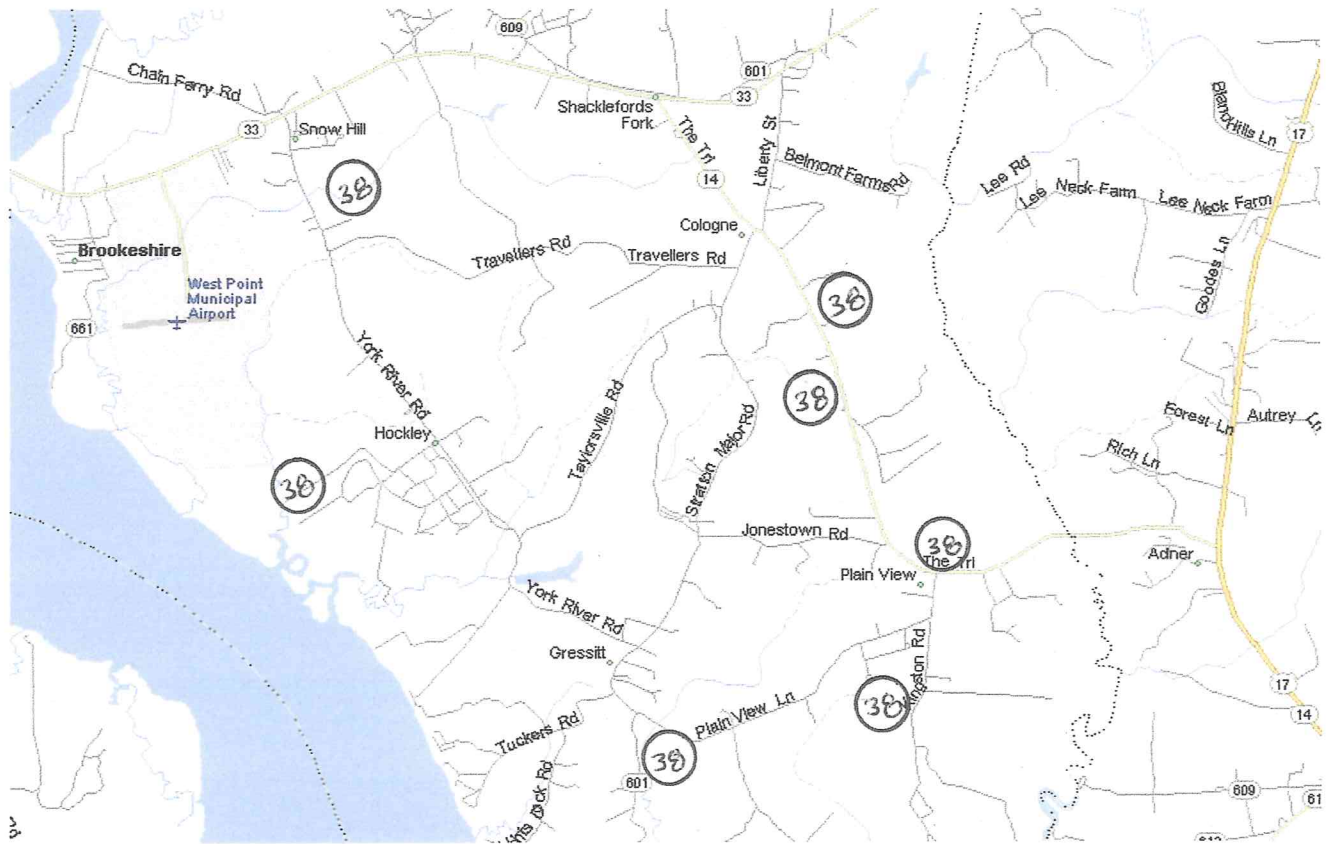
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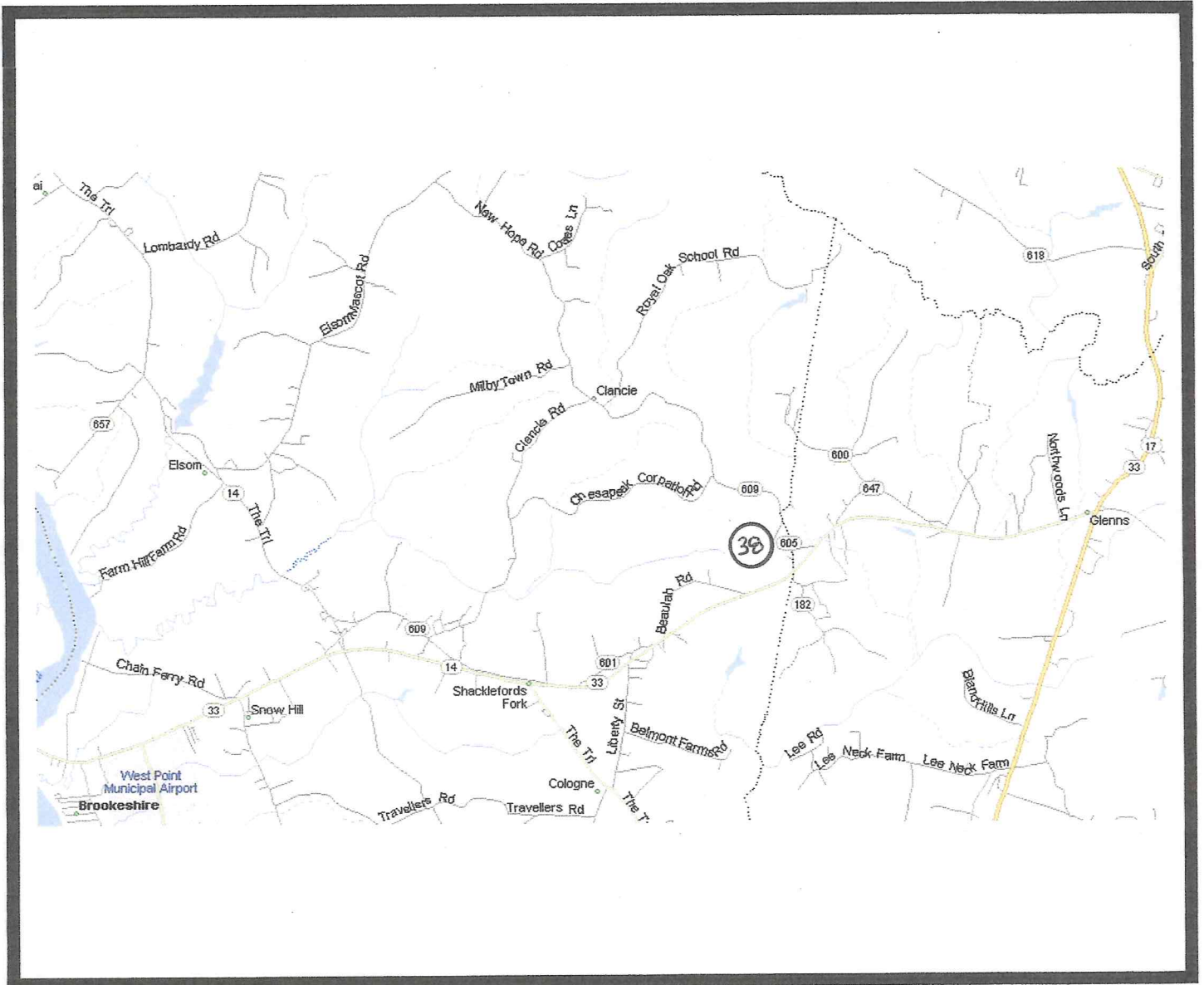


LOCATION MAP





Hunter B. Richardson  
KQ38  
Fields 14, 16, 17



LOCATION MAP

